

APPENDIX I

LITHOLOGIC LOGS FOR MONITORING WELLS

Introductory Statement:

The following lithologic and construction logs of the borings completed at Site L summarize the information collected during the boring and construction process. The "date drilled" is the actual date of construction in most cases, which is often identical to the actual date of boring completion. The "Total Depth of Well" is the final completed depth of the well itself, the boring may have extended further into the subsurface but collapse and/or specifications required installation to this reported depth. "Static Water Levels" were reported from the field notes of Richard Ryan, DER project supervisor, on October 12, 1992, to provide a single date of measurements for all wells with the exception of MW-32 which was measured November 4, 1992. Elevations reported on lithologic logs are considered as approximations only and were provided by DER staff prior to monitoring well installation.

General Lithologies:

Saprolite: Red to red-brown, silty to clayey saprolite with 0 to 20 % fine to coarse feldspar/quartz sand and variably altered clasts of quartzite and greenstone-greenschist, with subordinate siltstone/sandstone and micaceous schist. Bedding structure is locally preserved. All carbonate in the matrix and the limestone clasts of the protolith are absent. Wholly altered protolith clasts occur as yellow, tan, brown, and orange clay-rich pods in the saprolite matrix. In general, the percentage of unaltered clasts increases with depth.

Bedrock: Red to red-brown, very poorly sorted conglomerate with sub-rounded, matrix supported clasts and carbonate cement. Clasts range from fine cobbles to boulders in excess of 0.5 meters diameter and include: quartzite ($\approx 40\%$); tan to pale gray, microcrystalline, massive to moderately bedded limestone ($\approx 20\%$); massive to very well foliated greenstone-greenschist ($\approx 30\%$); red to red-brown, micaceous, arkosic sandstone and siltstone ($\approx 10\%$). Quartzite clasts are mostly of three types: gray, micaceous, moderately to poorly foliated, impure quartzite ($\approx 40-60\%$); dark gray to black, hematite-bearing, coarse crystalline, white vein quartz and/or quartzite ($\approx 25\%$); and gray-white-pale green, fine grained quartzite ($\approx 10-20\%$). The matrix comprises 30-50% of the rock and is poorly sorted, fine to coarse, quartz-rich sand and silt cemented with carbonate. Locally, carbonate-coated fractures occur.

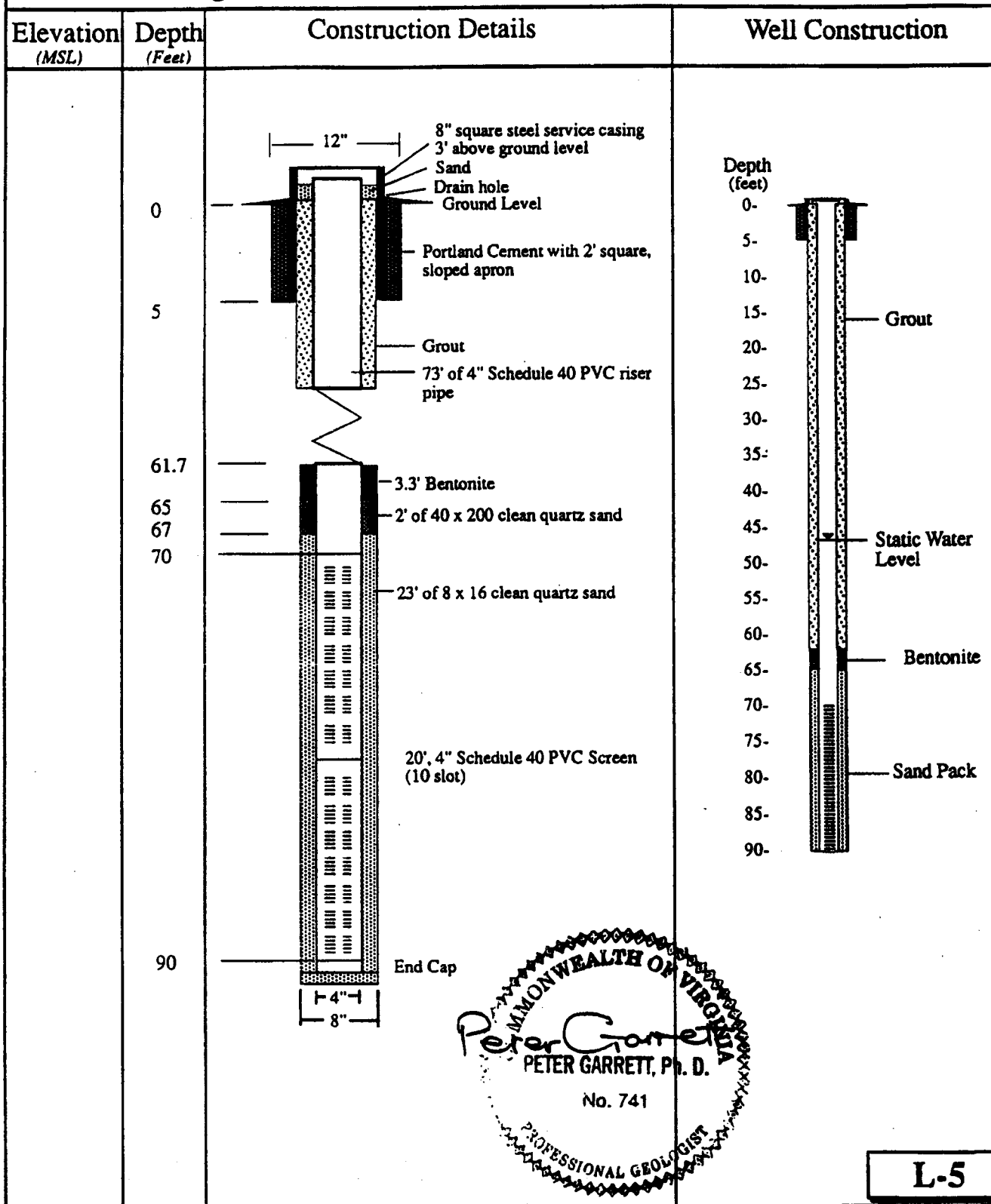
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 Meredith, N.H. 03253
 Phone (603) 279-4425
 FAX # 603-279-8717

Emery & Garrett Groundwater, Inc.

Project: Loudoun County Landfill
 Driller: Groundwater Systems, Inc.
 Geologist: John Brooks, Ph.D.
 DER Observer: Mike Fairbanks
 Well: L-5

Date Drilled: August 12, 1992
 Depth to Bedrock: not intercepted
 Total Depth of Well (g.l.): 90'
 Static Water Level (TOC): 52.40' (10/12/92,
 Ground Elevation: not available



Monitoring Well L-5 "As Built" for Loudoun County Landfill



EMERY AND GARRETT GROUNDWATER, INC.
170 WAUKEWAN STREET
MEREDITH, NH 03253
(603) 279-4425

Project: Loudoun County Landfill Driller: Groundwater Systems, Inc. Geologist: John Brooks, Ph.D. Date Drilled: 8/12/92 Well #: L-5	Static Water Level (toc): 52.40' (10/12/92) Depth to bedrock: not intercepted Well Diameter: 4" Total Depth: 90' Yield: <1 gpm
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DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	*SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
0					
2.5					
5		5-7.5	18	Sap/Cng	Clasts 40% of rock (90% Gs, 10% Qtz). Rock 95% weathered.
7.5					
10		10-12.5	18	Sap/Cng	Clasts 40% of rock (95% Gs, 5% Qtz). Rock 90% weathered.
12.5					
15		15-17.5	16	Sap/Cng	Clasts 45% of rock (92% Gs, 5% Qtz, 3% Ss). Rock 90% weathered.
17.5					
20					
22.5		20-22.5	18	Sap/Cng	Clasts 40% of rock (95% Gs, 5% Qtz, 2% Bs(?)). Rock 95% weathered.
25		22.5-25	17	Sap/Cng	Clasts 50% of rock (95% Gs, 5% Qtz, 1% Org (?)). Rock 95% weathered.
27.5		25-27.5	16	Sap/Cng	Clasts 25% of rock (90% Gs, 8% Qtz, 2% Org(?)). Rock 98% weathered.
30		27.5-30	14	Sap/Cng	Clasts 55% of rock (93% Gs, 6% Qtz, 1% Org (?)). Rock 90% weathered.
32.5		30-32.5	2	Sap/Cng	Clasts 50% of rock (100% Qtz). Rock 50% weathered.
35		32.5-35	16	Sap/Cng	Clasts 40% of rock (95% Gs, 5% Qtz). Rock 95% weathered.
37.5		35-37.5	12	Sap/Cng	Clasts 60% of rock (97% Gs, 3% Bs(?)). Rock 95% weathered.
40		37.5-40	0	Sap/Cng	Shelby tube smashed; no recovery.
42.5		40-42	6	Sap/Cng	Sample taken using 6" brass liners for split-spoon.
45		45-47	6	Sap/Cng	Duplicate 6" brass liner samples taken.
47.5					
50					
52.5		50-52	14	Sap/Cng	Clasts 65% of rock (97% Gs, 2% Qtz, 1% Org(?)). Rock 98% weathered.
55					Cuttings in 2 cm clumps at 52 feet. Water table.
57.5		55-57	18	Sap/Cng	Clasts 30% of rock (97% Gs, 3% Bt Sc). Rock 98% weathered.
60					Cuttings in 3-7 cm clumps at 57 feet.
62.5		60-62	14	Sap/Cng	Clasts 30% of rock (95% Gs, 4% Qtz, 1% Org(?)). Rock 95% weathered.
65					
67.5		65-67	16	Sap/Cng	Clasts 50% of rock (95% Gs, 5% Qtz). Rock 95% weathered.
70					Split-spoon muddy at 65-67 foot sampling interval.
72.5		70-72	14	Sap/Cng	Clasts 60% of rock (60% Gs, 40% Qtz). Rock 95% weathered.

 Medium red-brown saprolite after conglomerate with clasts weathered to variable colors.
 As above but beneath the water table.

ND - not determined

* 18" split-spoon

Sap=saprolite; Cng=conglomerate Gs=greenstone; Qtz=quartzite;

Bt Sc=biotite schist; Bs=basalt; Org=organic (peat?)

Peter Garrett

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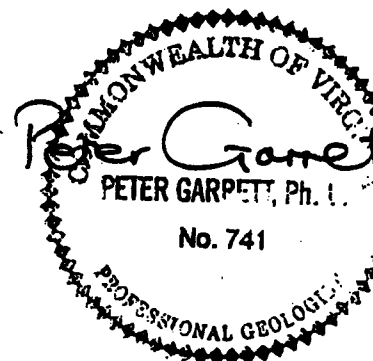
Project: Loudoun County Landfill Driller: Groundwater Systems, Inc. Geologist: John Brooks, Ph.D. Date Drilled: 8/12/92 Well #: L-5	Static Water Level (toc): 52.40' (10/12/92) Depth to bedrock: not intercepted Well Diameter: 4" Total Depth: 90' Yield: <1 gpm
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DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	* SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
75					No sampling between 72' and 100' feet.
77.5					
80					Cng
82.5					
85					
87.5					
90					Cng
92.5					
95					
97.5					
100				Cng	Drilled to 100 feet; well constructed to 90 feet. Collapse occurred to 96 feet prior to well construction.

	Medium red-brown saprolite after conglomerate with clasts weathered to variable colors.
	As above but beneath the water table.

ND - not determined
 * 18" split-spoon

Sap=saprolite; Cng=conglomerate Gs=greenstone; Qtz=quartzite;
 Bt Sc=biotite schist; Bs=basalt; Org=organic (peat?)



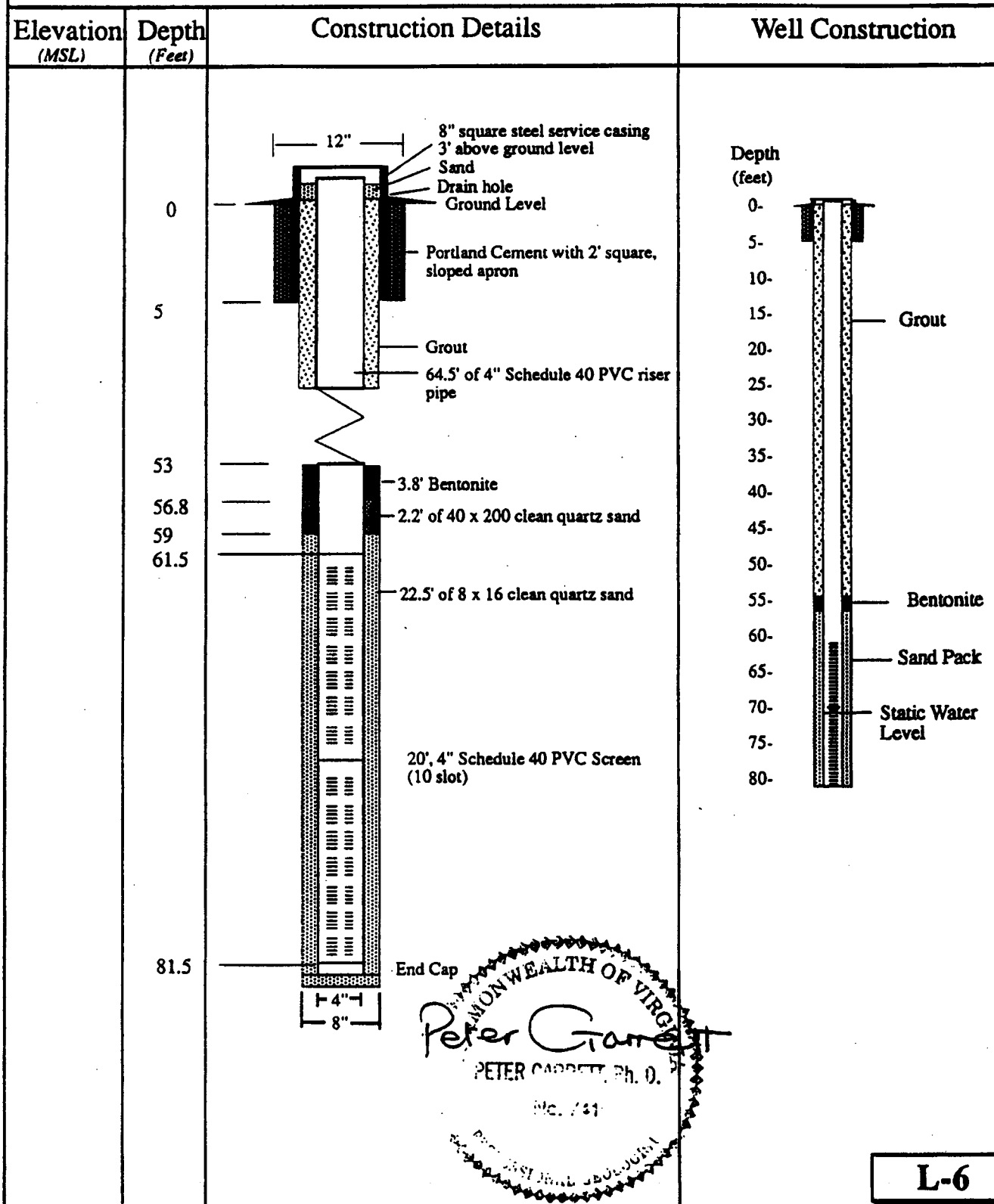
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Emery & Garrett Groundwater, Inc.

Project: Loudoun County Landfill
Driller: Groundwater Systems, Inc.
Geologist: John Brooks, Ph.D.
DER Observer: Richard Ryan
Well: L-6

Date Drilled: August 11, 1992
Depth to Bedrock: *not intercepted*
Total Depth of Well (g.l.): 81.5'
Static Water Level (TOC): 74.33' (10/12/92)
Ground Elevation: *not available*



Monitoring Well L-6 "As Built" for Loudoun County Landfill



EMERY AND GARRETT GROUNDWATER, INC.
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Project: Loudoun County Landfill Driller: Groundwater Systems, Inc. Geologist: John Brooks, Ph.D. Date Drilled: 8/11/92 Well #: L-6	Static Water Level (toc): 74.33' (10/12/92) Depth to bedrock: not intercepted Well Diameter: 4" Total Depth: 81.5' Yield: 1-2 gpm
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DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	* SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
0					
2.5					
5		5-6.5	16	Sap/Cng	Clasts 35% of rock (82% Gs, 16% Qtz, 2% Sc). Rock 90% weathered.
7.5					
10		10-11.5	13	Sap/Cng	Clasts 80% of rock (75% Gs, 25% Qtz). Rock 80% weathered.
12.5					
15		15-16.5	11	Sap/Cng	Clasts 50% of rock (80% Gs, 20% Qtz). Rock 90% weathered.
17.5					
20		20-21.5	10	Sap/Cng	Clasts 30% of rock (70% Gs, 30% Qtz). Rock 95% weathered.
22.5					
25		22.5-25	0		No recovery; 2 attempts.
27.5					
30		30-31.5	7	Sap/Cng	Clasts 50% of rock (60% Gs, 40% Qtz). Rock 87% weathered.
32.5					
35		35-36.5	11	Sap/Cng	Clasts 40% of rock (72% Gs, 14% Qtz, 14% Sc). Rock 85% weathered.
37.5					
40		40-41.5	9	Sap/Cng	Clasts 45% of rock (67% Gs, 33% Qtz). Rock 90% weathered.
42.5					
45		45-46.5	6	Sap/Cng	Clasts 45% of rock (66% Gs, 34% Qtz). Rock 90% weathered.
47.5		45-48.5	16	Sap/Cng	Clasts 40% of rock (75% Gs, 13% Qtz, 12% Qt Sc). Rock 90% weathered.
50		48.5-50	16	Sap/Cng	Clasts 60% of rock (84% Gs, 16% Qtz). Rock 85% weathered.
52.5		50-52.5	14	Sap/Cng	Clasts 55% of rock (80% Gs, 20% Qtz). Rock 85% weathered.
55		52.5-55	18	Sap/Cng	Clasts 50% of rock (70% Gs, 30% Qtz). Rock 85% weathered.
57.5		55-57.5	10	Sap/Cng	Clasts 35% of rock (70% Gs, 30% Qtz). Rock 90% weathered.
60		57.5-60	18	Sap/Cng	Clasts 50% of rock (80% Gs, 10% Qtz, 10% Qt Sc). Rock 90% weathered.
62.5		60-62.5	12	Sap/Cng	Clasts 60% of rock (83% Gs, 17% Qtz). Rock 90% weathered.
65		62.5-65	6		6" brass lined split-spoon sample for lab analysis.
67.5					
70		67.5-70	12	Sap/Cng	2nd try for split-spoon with 6" brass liners.
72.5					Soil damp at 70-72 feet.

 Medium red-brown saprolite after conglomerate with clasts weathered to variable colors.
 As above but beneath the water table.



ND - not determined
 * 18" split-spoon

Sap=saprolite; Cng=conglomerate; Gs=greenstone; Qtz=quartzite
 Sc=schist; Qt Sc=quartz schist; Bt Sc=biotite schist

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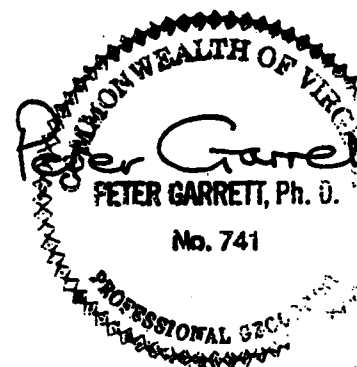
Project: Loudoun County Landfill Driller: Groundwater Systems, Inc. Geologist: John Brooks, Ph.D. Date Drilled: 8/11/92 Well #: L-6	Static Water Level (toc): 74.33' (10/12/92) Depth to bedrock: not intercepted Well Diameter: 4" Total Depth: 81.5' Yield: 1-2 gpm
--	--

DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	* SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
75		72.5-75	9	Sap/Cng	Clasts 60% of rock (51% Gs, 16% Qtz, 33% Qt Sc). Rock 80% weathered.
77.5					Soil wet at 75'.
80		77.5-80	14	Sap/Cng	Clasts 40% of rock (82% Gs, 18% Qtz). Rock 80% weathered.
82.5					
85		82.5-85	9	Sap/Cng	Clasts 40% of rock (62% Gs, 25% Qtz, 13% Bt Sc). Rock 80% weathered.
87.5					
90		87.5-90	18	Sap/Cng	Clasts 50% of rock (60% Gs, 20% Qtz, 20% Qt Sc). Rock 90% weathered.
92.5					
95		92.5-95	4	Sap/Cng	Clasts 30% of rock (33% Gs, 17% Qtz, 50% Qt Sc). Rock 90% weathered.
Drilled to 95 feet but could not keep hole open below 81.5 feet because of collapse of water saturated saprolite. Well installed to 81.5 feet given OK by Richard Ryan.					

 Medium red-brown saprolite after conglomerate with clasts weathered to variable colors.
 As above but beneath the water table.

ND - not determined
 * 18" split-spoon

Sap=saprolite; Cng=conglomerate; Gs=greenstone; Qtz=quartzite
 Sc=schist; Qt Sc=quartz schist; Bt Sc=biotite schist



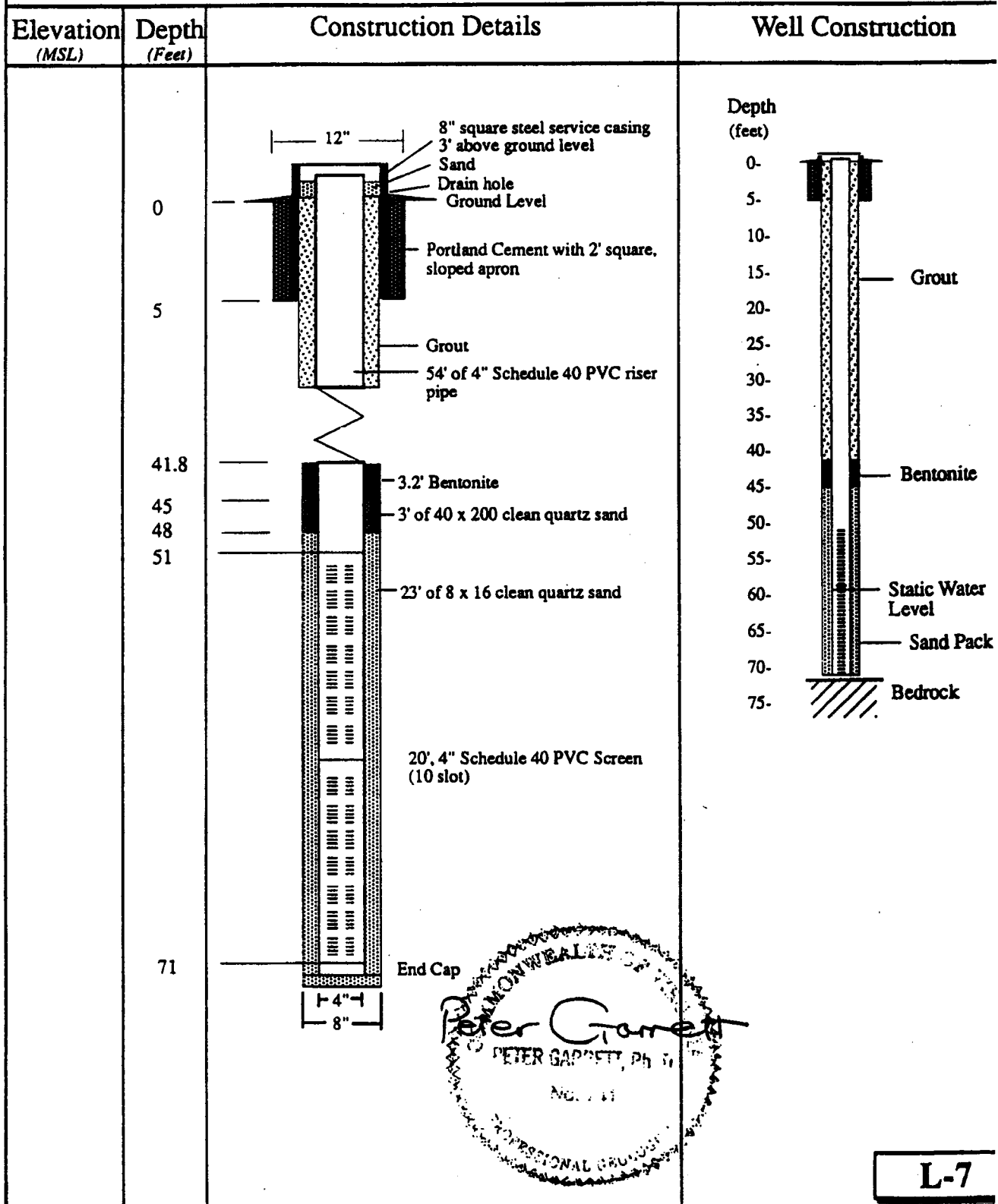
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Emery & Garrett Groundwater, Inc.

Project: Loudoun County Landfill
Driller: Groundwater Systems, Inc.
Geologist: John Brooks, Ph.D.
DER Observer: Richard Ryan
Well: L-7

Date Drilled: August 14, 1992
Depth to Bedrock: 72'
Total Depth of Well (g.l.): 71'
Static Water Level (TOC): 62.81' (10/12/92)
Ground Elevation: not available




Monitoring Well L-7 "As Built" for Loudoun County Landfill

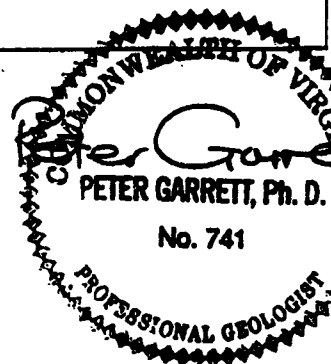


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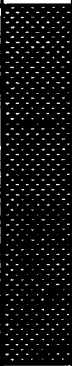
Project: Loudoun County Landfill Driller: Groundwater Systems, Inc. Geologist: John Brooks, Ph.D. Date Drilled: 8/14/92 Well #: L-7	Static Water Level (toc): 62.81' (10/12/92) Depth to bedrock: 72' Well Diameter: 4" Total Depth: 71' Yield: <10gpm
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DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	* SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
0					Samples not required for this well because of sampling at L-7D. Cuttings were collected but not described in detail. Samples were collected at 10 foot intervals between 10 and 70 feet.
2.5					
5					
7.5					
10				Sap/Cng	
12.5					
15					
17.5					
20				Sap/Cng	
22.5					
25					
27.5					
30				Sap/Cng	
32.5					
35					
37.5					
40				Sap/Cng	
42.5					
45					
47.5					
50				Sap/Cng	
52.5					
55					
57.5					
60				Sap/Cng	Change to dark brown cuttings; due to dampness/weathering.
62.5					
65					No cuttings from 65 to 70 feet due to wetness of saprolite.
67.5					
70				Sap/Cng	
72.5					

 Medium red-brown saprolite after conglomerate with clasts weathered to variable colors.
 As above but beneath the water table.
 Bedrock; Goose Creek Fm. conglomerate.
 ND - not determined Sap=saprolite; Cng=conglomerate
 * 18" split-spoon



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(603) 279-4425

Project: Loudoun County Landfill Driller: Groundwater Systems, Inc. Geologist: John Brooks, Ph.D. Date Drilled: 8/14/92 Well #: L-7					Static Water Level: 62.81' (10/12/92) Depth to bedrock: 72' Well Diameter: 4" Total Depth: 71' Yield: <10 gpm
DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	* SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
75				Cng	At 78' muddy drilling; bit and rods wet from 78 to 60 feet.
77.5					A yield of < 5gpm occurred after hole "developed" a little. Yield interpreted to be from above and/or at the bedrock/saprolite interface.
80					
82.5					
85				Cng	
87.5					
90					
92.5					
95				Cng	No additional water observed within bedrock.
97.5					
100				Cng	Drilled to 100 feet but collapse occurred to 71 feet. Multiple attempts to clean out boring below bedrock/saprolite interface failed, so well installed to 71 feet.

 Bedrock; Goose Creek Fm. conglomerate.

ND - not determined
 * 18" split-spoon

Cng=conglomerate


 Peter Garrett.

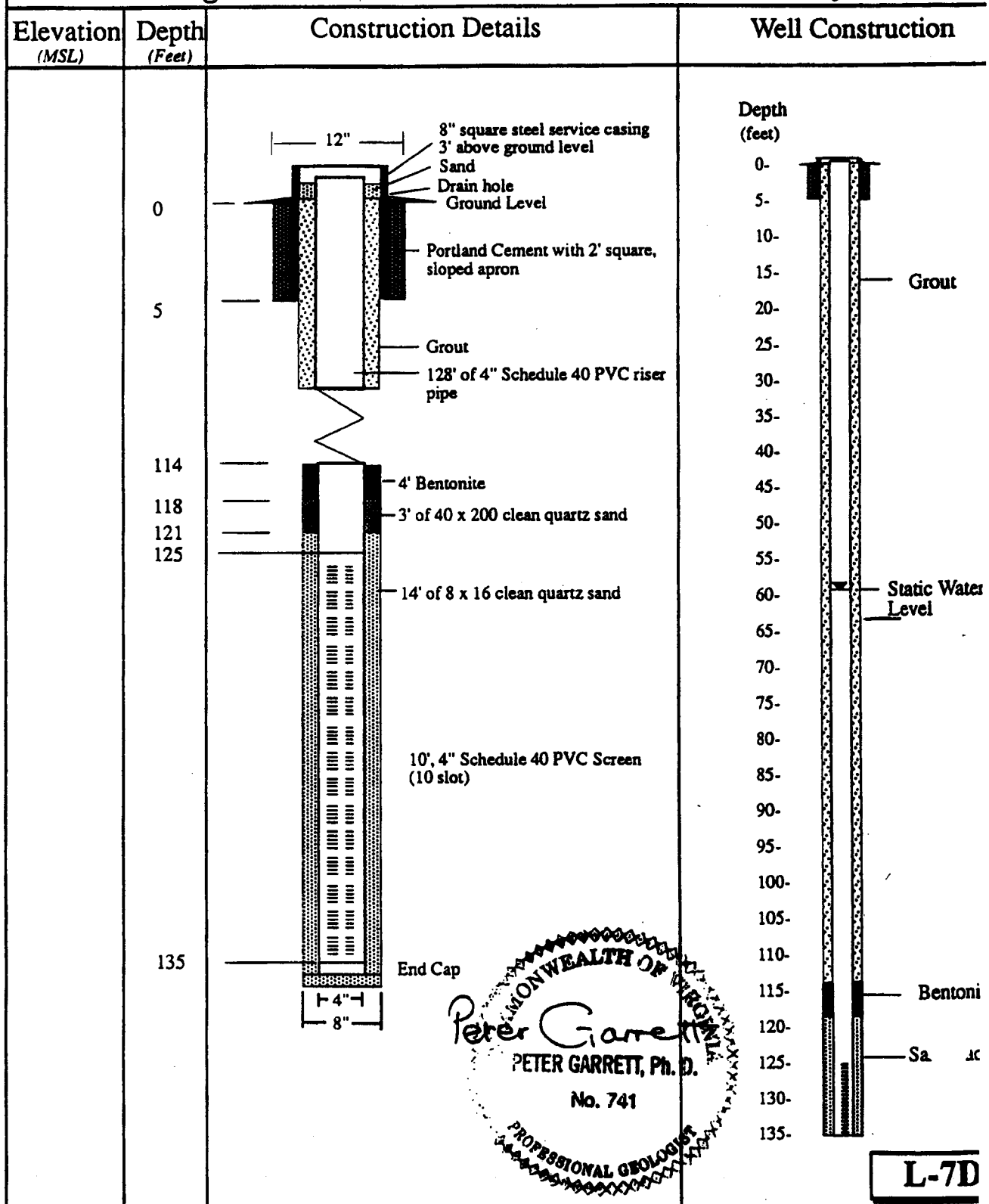
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FAX # 603-279-8717

Emery & Garrett Groundwater, Inc.

Project: Loudoun County Landfill
Driller: Groundwater Systems, Inc.
Geologist: John Brooks, Ph.D.
DER Observer: Richard Ryan
Well: L-7D

Date Drilled: August 13, 1992
Depth to Bedrock: 63'
Total Depth of Well (g.l.): 135'
Static Water Level (TOC): 62.66' (10/12/92)
Ground Elevation: not available

Monitoring Well L-7D "As Built" for Loudoun County Landfill






PETER GARRETT, Ph.D.
 No. 741
 PROFESSIONAL GEOLOGIST

EMERY AND GARRETT GROUNDWATER, INC.
170 WAUKEWAN STREET
MEREDITH, NH 03253
(603) 279-4425

Project: Loudoun County Landfill	Static Water Level (toc): 62.66' (10/12/92)
Driller: Groundwater Systems, Inc.	Depth to bedrock: 63'
Geologist: John Brooks, Ph.D.	Well Diameter: 4"
Date Drilled: 8/13/92	Total Depth: 135'
Well #: L-7D	Yield: <5 gpm

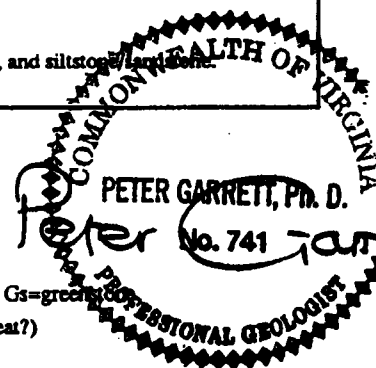
DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	* SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
0					
2.5					
5					
7.5		5-7	118	Sap/Cng	Clasts 40% of rock (90% Gs, 5% Qtz). Rock 100% weathered.
10					
12.5		10-12	18	Sap/Cng	Clasts 50% of rock (85% Gs, 10% Ss, 5% Bt Sc). Rock 95% weathered.
15					
17.5		15-17	18	Sap/Cng	Clasts 50% of rock (80% Gs, 5% Qtz, 5% Org(?), 10% Ss). Rock 95% weathered.
20					
22.5		20-22	17	Sap/Cng	Clasts 60% of rock (85% Gs, 10% Qtz, 5% Org(?)). Rock 90% weathered.
25		22.5-25	18	Sap/Cng	Clasts 50% of rock (93% Gs, 5% Qtz, 2% Org(?)). Rock 95% weathered.
27.5		25-27.5	16	Sap/Cng	Clasts 40% of rock (95% Gs, 5% Qtz). Rock 95% weathered.
30		27.5-30	13	Sap/Cng	Clasts 50% of rock (70% Gs, 30% Qtz). Rock 70% weathered.
32.5		30-32.5	16	Sap/Cng	Clasts 50% of rock (100% Gs/St). Rock 95% weathered.
35		32.5-35	0	ND	No sample recovered.
37.5		35-37.5	14	Sap/Cng	Clasts 45% of rock (90% Gs, 10% Qtz). Rock 90% weathered.
40		37.5-40	9	Sap/Cng	Clasts 55% of rock (80% Gs, 20% Qtz). Rock 80% weathered.
42.5		40-42.5	ND		
45		42.5-45	0		Shelby tube crushed; no recovery.
47.5		45-47.5	11	Sap/Cng	Samples taken using 6" brass liners used in split-spoons.
50		47.5-50	0		2nd try with brass liners in split-spoon.
52.5		50-52	4	Sap/Cng	Clasts 50% of rock (50% Gs, 50% Qtz). Rock 70% weathered.
55					
57.5		55-57	5	Sap/Cng	Clasts 50% of rock (50% Gs, 50% Qtz). Rock 60% weathered.
60					
62.5		60-62	2.5	Sap/Cng	Clasts 30% of rock (70% Gs, 30% Qtz). Rock 80% weathered.
65					Bedrock at approximately 62-63 feet.
67.5					
70				Cng	Conglomerate with clasts of greenschist, quartzite, and siltstone.
72.5					

Cuttings of bedrock collected at 10 foot intervals between 70 and 120 feet.

	Medium red-brown saprolite after conglomerate with clasts weathered to variable colors.
	As above but beneath the water table.
	Bedrock; Goose Creek Fm. conglomerate.

ND - not determined
 * 18" split-spoon

Sap=saprolite; Cng=conglomerate; Qtz=quartzite; Gs=greenschist;
 St=siltstone; Bt Sc=biotite schist; Org=organic (peat?)



EMERY AND GARRETT GROUNDWATER, INC.
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(603) 279-4425

Project: Loudoun County Landfill Driller: Groundwater Systems, Inc. Geologist: John Brooks, Ph.D. Date Drilled: 8/13/92 Well #: L-7D	Static Water Level (toc): 62.66' (10/12/92) Depth to bedrock: 63' Well Diameter: 4" Total Depth: 135' Yield: <5 gpm
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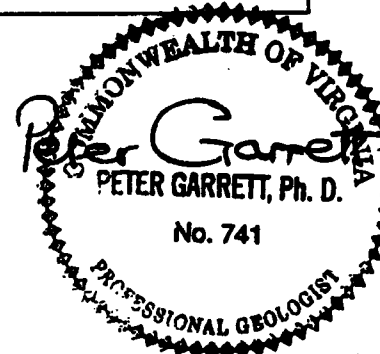
DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	* SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
75					Fracture zone at 75 feet with approximate yield of 80 gpm.
77.5					
80				Cng	Conglomerate with clasts of greenschist, quartzite, and siltstone/sandstone.
82.5					
85					
87.5					
90				Cng	Conglomerate with clasts of greenschist, quartzite, and siltstone/sandstone.
92.5					
95					
97.5					
100				Cng	Conglomerate with clasts of greenschist, quartzite, and siltstone/sandstone.
102.5					
105					
107.5					
110				Cng	Conglomerate with clasts of greenschist, quartzite, and siltstone/sandstone.
112.5					
115					
117.5					
120				Cng	Conglomerate with clasts of greenschist, quartzite, and siltstone/sandstone.
122.5					
125					
127.5					
130				Cng	Conglomerate with clasts of greenschist, quartzite, and siltstone/sandstone.
132.5					At 132'; water stopped coming out of drill hole; possible void?
135					
137.5					At 137'; 1-5 gpm of water started to blow out of boring.
140					
142.5					Drilled to 141 feet but collapse of hole to 138 feet prior to installation of well. Well constructed to 135 feet.

Cuttings of bedrock collected at 10 foot intervals between 70 and 120 feet. Well drilled to 141 feet.

 Bedrock; Goose Creek Fm. conglomerate.

ND - not determined

* 18" split-spoon



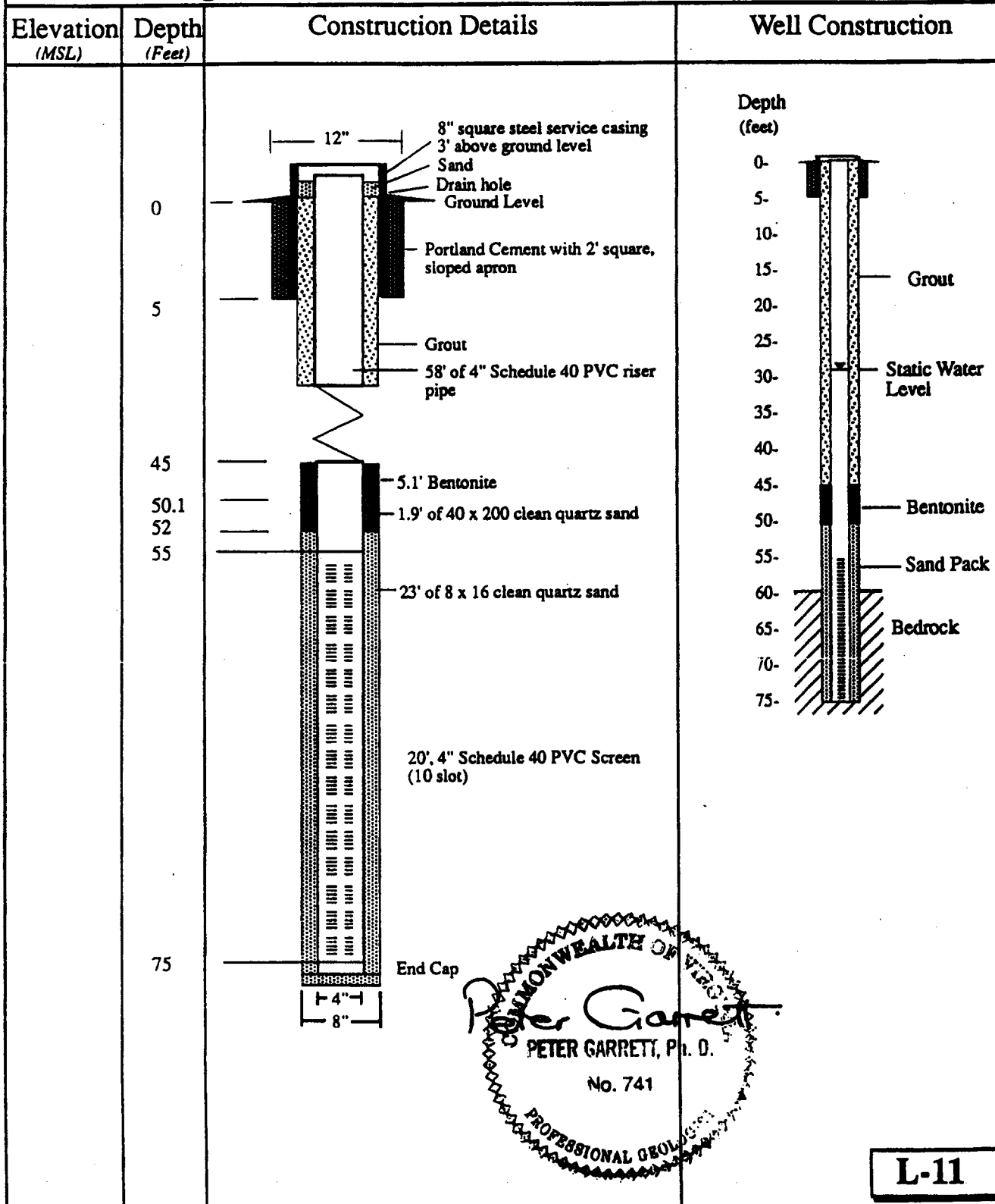
170 Waukegan Street
Meredith, N.H. 03253
Phone (603) 279-4425
FAX # 603-279-8717

Emery & Garrett Groundwater, Inc.

Project: Loudoun County Landfill
Driller: Groundwater Systems, Inc.
Geologist: James Brady
DER Observer: Richard Ryan
Well: L-11

Date Drilled: September 1, 1992
Depth to Bedrock: 60'
Total Depth of Well (g.l.): 75'
Static Water Level (TOC): 33.22' (10/12/92)
Ground Elevation: not available

Monitoring Well L-11 "As Built" for Loudoun County Landfill

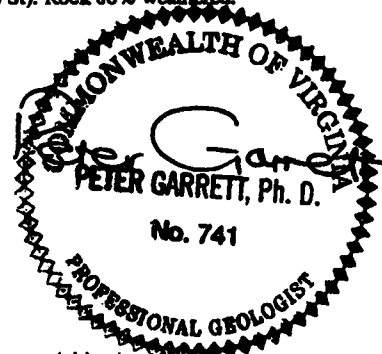





EMERY AND GARRETT GROUNDWATER, INC.
170 WAUKEWAN STREET
MEREDITH, NH 03253
(603) 279-4425

Project: Loudoun County Landfill
Driller: Groundwater Systems, Inc.
Geologist: James Brady
Date Drilled: 9/1/92
Well #: L-11

Static Water Level (toc): 33.22' (10/12/92)
Depth to bedrock: 60'
Well Diameter: 4"
Total Depth: 75'
Yield: 120 gpm

DEPTH (INCHES)	WELL LOG	SAMPLE INT. (FEET)	*SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
0					
2.5					
5					
7.5		5-7	23	Sap/Cng	Clasts 55% of rock (75% Qtz, 20% Gs, 5% St). Rock 95% weathered.
10		10-12	12	Sap/Cng	6" brass tube sample.
12.5					
15					
17.5		15-17	ND	ND	Split spoon attempted, Qtz clast prevented sample recovery.
20		18-19	20	Sap/Cng	6" brass tube sample.
22.5		20-22	ND	ND	No sample taken.
25		25-26	20	Sap/Cng	6" brass tube sample.
27.5		25-27	4	Sap/Cng	Clasts 65% of rock (70% Qtz, 15% St, 10% Gs, 5% Ss). Rock 80% weathered.
30					
32.5		30-32.5	10	Sap/Cng	Clasts 50% of rock (50% Qtz, 30% Gs, 20% St). Rock 80% weathered.
35		35-36	16	Sap/Cng	6" brass tube sample. WET sample.
37.5					
40					
42.5					
45					
47.5					
50					
52.5					
55					
57.5					
60				Cng	Bedrock/saprolite interface at 60 feet; 100+ gpm yield at interface.
62.5					
65				Cng	Cuttings collected 65': Conglomerate with clasts of Qtz, Gs, St, and Ss.
67.5					
70					
72.5					
75					



 Medium red-brown saprolite after conglomerate with clasts weathered to variable colors.
 As above but beneath the water table.
 Bedrock; Goose Creek Fm. conglomerate.

ND - not determined
 * 24" split-spoon

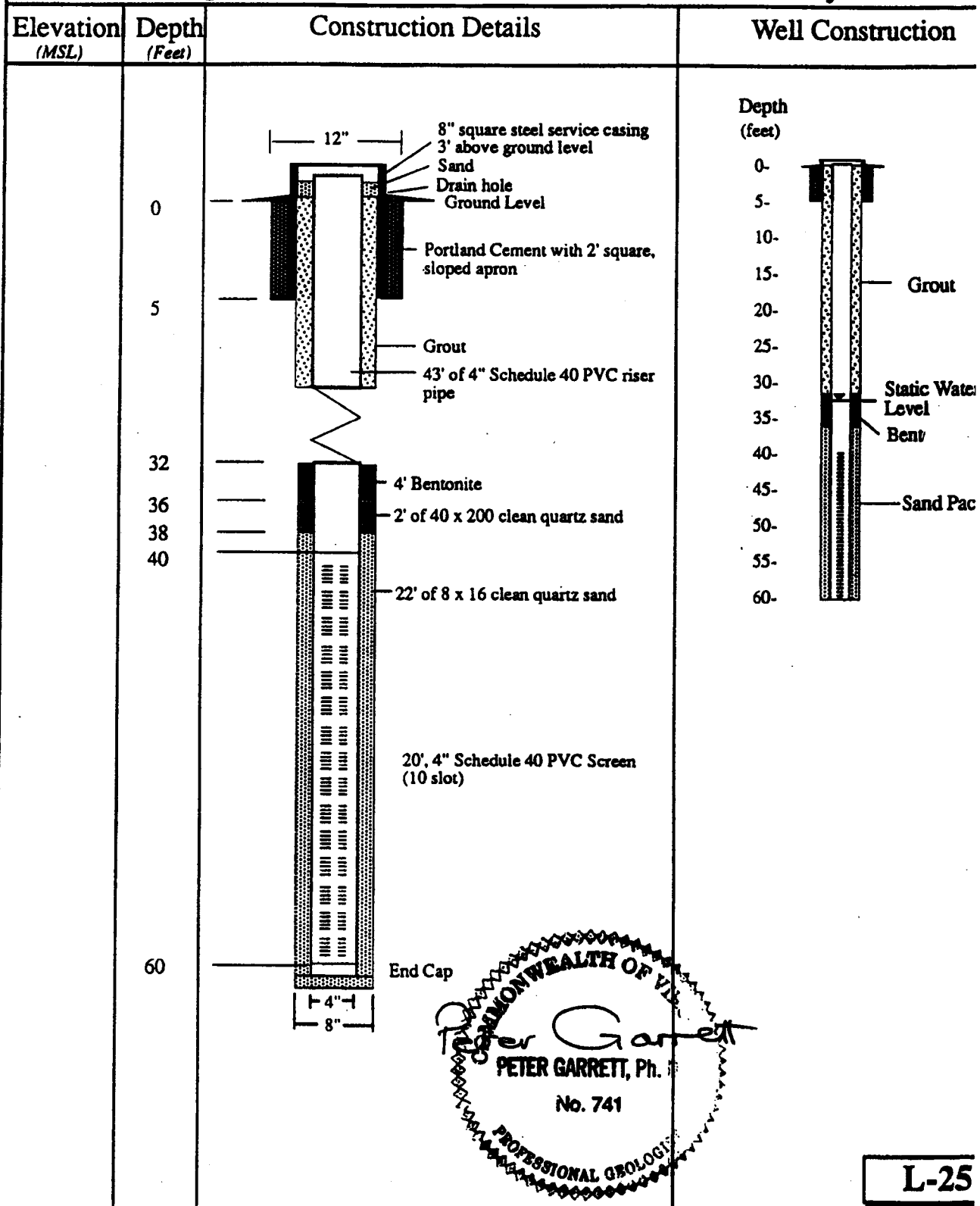
Sap=saprolite; Cng=conglomerate; Qtz=quartzite, Gs=greenstone;
 St=siltstone; Ss=sandstone

Emery & Garrett Groundwater, Inc.

Project: Loudoun County Landfill
Driller: Groundwater Systems, Inc.
Geologist: James Brady
DER Observer: Richard Ryan
Well: L-25

Date Drilled: October 6, 1992
Depth to Bedrock: not intercepted
Total Depth of Well (g.l.): 60'
Static Water Level (TOC): 36.96' (10/12/92)
Ground Elevation: not available



Monitoring Well L-25 "As Built" for Loudoun County Landfill



EMERY AND GARRETT GROUNDWATER, INC.
170 WAUKEWAN STREET
MEREDITH, NH 03253
(603) 279-4425

Project: Loudoun County Landfill	Static Water Level (toc): 36.96' (10/12/92)
Driller: Groundwater Systems, Inc.	Depth to bedrock: not intercepted
Geologist: James Brady	Well Diameter: 4"
Date Drilled: 10/6/92	Total Depth: 60'
Well #: L-25	Yield: >12 gpm

DEPTH (FEET)	WELL LOG	SAMPLE INT. (FEET)	SAMPLE REC. (INCHES)	ROCK TYPE	DESCRIPTION
0					
2.5					
5					
7.5					
10					
12.5		10-12	4	Sap/Cng	Clasts 40% of rock (80% Qtz, 10% Gs, 10% St). Rock 90% weathered.
15					
17.5					
20					
22.5		20-22	12	Sap/Cng	Clasts 45% of rock (70% Qtz, 15% Gs, 10% St). Rock 95% weathered.
25					
27.5					
30					
32.5		30-32.5	6	Sap/Cng	Clasts 35% of rock (75% Qtz, 20% Gs, 5% St). Rock 90% weathered.
35					
37.5					Moist cuttings at 35' - 40'.
40					
42.5		40-42.5	20	Sap/Cng	Clasts 50% of rock (60% Qtz, 25% Gs, 10% St, 5% Ss). Rock 85% weathered.
45					
47.5					
50					
52.5					
55					
57.5					
60					Drilled to 60 feet; well constructed to 60 feet.

 Medium red-brown siltstone after conglomerate with clasts weathered to variable colors.
 As above but beneath the water table.

ND - not determined
 * 24" split-spoon

Sap=saprolite; Cng=conglomerate; Qtz= quartzite; Gs=greenstone; St=siltstone;
 Ss=sandstone

